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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,683	09/15/2003	Melvin E. Wolfe JR.	28076/SV1094	9788
4743	7590	07/24/2006		
MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			EXAMINER PHAN, THIEM D	
			ART UNIT 3729	PAPER NUMBER

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/662,683

Applicant(s)

WOLFE ET AL.

Examiner

Tim Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-19 and 33-43 is/are pending in the application.
- 4a) Of the above claim(s) 33-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 5/30/06 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-13 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sunaga et al (US 6,737,770 B2) in view of Matsuoka et al (US 5,880,666) or vice versa.

**With regard to claim 11,** Sunaga et al teach a process of making brushless motor,

comprising:

- winding a first magnet wire of a coil (Fig. 1, 7) connecting to a first lug or terminal (Fig. 1, 48, col. 4, lines 57-59) in a winding board (Fig. 1, 40) and a first protrusion (Fig. 1, 5) in a stator (Fig. 1, 2), the winding board (Fig. 1, 40) being disposed on the stator (Fig. 1, 2) and including a switch (Fig. 1, 41) having at least an internal terminal, and a fuse (Fig. 7A, 60) having an input terminal and an exit terminal;
- electrically connecting an end portion of the first magnet wire to the switch (Fig. 1, 41; col. 4, lines 26 & 27) for changing the current direction to the coils; except for having the end portion of the first magnet wire directly connected to the switch.

Matsuoka et al teach a process of mounting fuse with press-connecting terminals and wire cutter at any intermediate portion of the circuit (Col. 1, line 41), comprising:

- laying a first wire (Fig. 3, 16) connection to an exit terminal and an input terminal (Fig. 3, 4 & 50) on a fuse (Fig. 3, 10);
- severing the first wire (Fig. 4, 16) between the input terminal and the exit terminal on the fuse.

It would have been obvious to one of ordinary skill in the art to combine the two teachings by applying the process of wire connection with fuse, as taught by Matsuoka et al, to the process of making brushless motor by Sunaga et al, in order to mount any or further fuse protection at any intermediate portion of the circuit and it would have also been obvious to realize that the mere direct connection between end portion of the first magnet wire and the

switch is just design choice, since electrically-wise there is no difference between direct and nondirect contacts of two devices as the electrons movement, voltage or current between these two devices are absolutely unaffected, therefore one of ordinary skill in the art would have expected Sunaga et al' invention of non-direct contact to perform equally well as the one of direct contact of applicants' invention. Furthermore, applicants fail to disclose any benefit or critical requirement of having a direct connection between the end portion of the first magnet wire and the switch over a non-direct connection between the end portion of the first magnet wire and the switch through an electrical, connecting line or track.

**With regard to claim 12,** Sunaga et al and Matsuoka et al teach a process of connecting wire to fuse, which reads on applicants' claimed invention, including the well known clipping of a fuse to a board (Col. 1, lines 16-18) by Sunaga et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a clipping step to any loose wire for better connection and handling.

**With regard to claim 13,** Sunaga et al teach several switches (Figs. 1 & 6, 41) mounted on the printed wiring board (Fig. 1, 40) for changing directions of the drive current applied to the exciting coil (Fig. 1, 7, col. 4, lines 26-29).

I would be obvious to one of ordinary skill in the art at the time the invention was made to realize that a switch (Fig. 8A, 41; col. 4, lines 25-28) that changes current drive directions, even for single pole switch, must have internal and external terminals with blocks or connecting

pads/posts, which connect to the magnet coil.

**With regard to claim 16**, Sunaga et al teach the winding the first magnet wire of the coil (Fig. 1, left 7) about the first lug or terminal (Fig. 1, 41; col. 4, lines 57-59) in the winding board and the first protrusion or core (Fig. 1, left 5) in the stator (Fig. 1, 2) to form one of the two poles (Col. 3, lines 6-8).

**With regard to claim 17**, Sunaga et al teach the winding the second magnet wire of the coil (Fig. 1, right 7) about the second lug or terminal (Fig. 1, 41; col. 4, lines 57-59) in the winding board and the second protrusion or core (Fig. 1, right 5) in the stator (Fig. 1, 2) to form the other of the two poles (Col. 3, lines 6-8).

**With regard to claim 18**, Sunaga et al teach several switches (Fig. 1 & 6, 41) mounted on the printed wiring board (Fig. 1, 40) for changing directions of the drive current applied to the exciting coil (Fig. 1, 7, col. 4, lines 26-29).

It would be obvious to one of ordinary skill in the art at the time the invention was made to realize that a switch that changes current drive directions, even for single pole switch, must have internal and external terminals with blocks, which connect to the magnet coil.

4. Claims 14, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sunaga et al in view of Matsuoka et al and further view of Lewchenko et al (US 6,058,595).

**With regard to claims 14, 15 and 19**, Sunaga et al and Matsuoka et al teach a process of connecting wire with fuse, including the electrical connection of the magnetic coil to the terminals (Sunaga et al; Col. 4, lines 57-59) and the connection by welding process (Sunaga et al; Abstract), which reads on applicants' claimed invention.

Lewchenko et al teach a method of manufacturing an armature with the hooks or tang terminals where the magnet wires are connected (Col. 1, lines 38-40), which is old art.

It would be obvious to one of ordinary skill in the art at the time the invention was made to combine the three teachings by applying the terminal tangs, as taught by Lewchenko et al, as connecting point to the magnet wire of the coil and soldering or welding it in order to have good contact.

### ***Response to Arguments***

5. Applicants' arguments filed 5/30/06 have been fully considered but they are not persuasive for the following reasons:

(A) Applicants' traversals (Remarks about Restriction, pages 7-9) of the Restriction Requirement on the grounds that the search for the inventions of Group I (Claims 11-19), Group II (Claims 33-42) and Group III (Claim 43) do not place serious burden on the examiner in order to search for prior art, in different sub-classes or additionally and there is no separate utility between these three Groups.

This is not found persuasive because the examiner has established a prima facie case having shown in the Office Action filed on 3/27/06, that the Combination-Subcombination Restriction is provided under MPEP 806.05(c) and the invention of Group I has a separate classification from the invention of Group II. Moreover, the inventions of Groups I, II and III each have a separate status in the art and clearly have a separate field of search which would be non-coextensive.

In accordance with MPEP § 803, the examiner has demonstrated that the inventions of Groups I, II and III are each independent or distinct as claimed (filed on 3/27/06) and a serious burden would be placed on the examiner as discussed above.

Should applicants traverse on the ground that the inventions are not patentably distinct, applicants should **submit evidence or identify such evidence now of record** showing the inventions **to be obvious variants or clearly admit on the record that this is the case**. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the **evidence or admission may be used in a rejection** under 35 U.S.C.103(a) of the other inventions. Accordingly, Claims 33-43 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Groups, there being no allowable generic or linking claim.

The Restriction filed on 3/27/06 is hereby **made Final**.

Applicants are required to cancel these nonelected Claims (33-43) or take other appropriate action. Applicants are reminded that upon the cancellation of claims to a non-elected inventions, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the



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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

(B) Applicants' arguments (Remarks about Claims 11-19 and 33-43, pages 9 and 10) with respect to claims 11-19 have been considered but are moot in view of the new ground of rejection, and with respect to claims 33-43 they are also considered and responded accordingly in paragraph 5-(A) above.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M - F, 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tim Phan  
Examiner  
Art Unit 3729

tp  
July 20, 2006



**A. DEXTER TUGBANG**  
**PRIMARY EXAMINER**